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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,262	10/20/2003	Min-Chieh Chou	64,600-126	2887

570 7590 03/23/2006

AKIN GUMP STRAUSS HAUER & FELD L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA, PA 19103

EXAMINER	
NGUYEN, JIMMY	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/689,262	CHOU ET AL.	
	Examiner	Art Unit	
	Jimmy Nguyen	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3,5,7,13,18-22,24,25,33 and 34* is/are pending in the application.

4a) Of the above claim(s) *26 - 32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,3,5,7,13,18-22,24,25,33 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Argument

The examiner acknowledges the amendment filed 12/23/05 with the following effect;

The amendments are in mood of new ground of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 3, 7, 18, 25, 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans et al (US 4,975,638).

As to claims 7, **18**, Evans et al disclose (figs 3, 4, 10) a probe module comprising:

a probe base (12, fig 4) having a plurality of conductive traces (T);

a plurality of probe pins (16) attached to probe base (12), each of the probe pins (16) comprising an elongated body (middle section of 16), wherein at least part of the elongated body (middle section of 16) is bonded to the plurality of conductive metal traces (T) of the probe base (12);

a circuit interconnect device (10, fig 3) for connecting said plurality of probe pins (16) to an inspection apparatus; and

a compression arm (13, 14, fig 10) attached to the probe base (12) and configured to engage the plurality of probe pins (16).

As to claim 3, Evans et al disclose (figs 3, 4, 10) the probe module of claim 1 wherein said circuit interconnect device (10, fig 3) comprises a plurality of conductive probe circuits provided on said probe base (12, fig 4) in electrical contact with said plurality of probe pins (16), respectively, and a flexible circuit board (10) provided in electrical contact with said plurality of conductive probe circuits (T).

As to claim 25, Evans et al disclose (figs 3, 4, 10) the probe pins include an elongated arm body (the middle section of probe) such that at least a part of the elongated arm body is attached with the probe base (12).

As to claim 34, Evans et al disclose (figs 3, 4, 10) the probe module of claim 7, further comprising at least one adjustment screw (18) provided on the probe base (201) that can be manipulated to adjust the compression arm against the plurality of probe pins to adjust the contact angle of the probe pins.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 5, 13, 19, 20, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al (US 4,975,638) in view of Zhou et al (US 2005/0035775).

As to claim 2, Evans et al disclose everything except for each of said plurality probe pins further comprises a probe pin head extending from probe pin body and generally tapered probe pin tip provided on said probe pin head.

On the other hand, Zhou et al disclose (figs 3, 4, 6) the probe module of claim 7 wherein each of said plurality probe pins (30) further comprises a probe pin head extending from probe pin body (30) and generally tapered probe pin tip (236) provided on said probe pin head.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Evans et al and use the semi spherical probe tip or Tetrahedrall as taught by Zhou et al for the purpose of ensuring a better contact.

As to claims 5, 13, 20, 24, Evans et al disclosed everything except for each of the plurality of probe pins further comprises a probe pin head supported by the probe pin body and generally semi-spherical probe pin tip or Tetrahedral provided on the probe pin head.

On the other hand, Zhou et al disclose (figs 3, 4, 6) each of the plurality of probe pins (28,30) further comprises a probe pin head supported by the probe pin body (30) and generally semi-spherical probe pin tip or Tetrahedral provided on the probe pin head (see fig 6).

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Evans et al and use the semi spherical probe tip or Tetrahedrall as taught by Zhou et al for the purpose of ensuring a better contact.

As to claim 19, Zhou et al disclose (figs 3, 4, 6) the probe pin tip (30) has a generally polyhedral configuration.

5. Claims 3, 21, 22, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al (US 4,975,638) in view of Cheng et al (US 2005/0012513).

As to claim 3, Evans et al disclose (figs 3, 4, 10) the probe module of claim 7 wherein said circuit interconnect device (10, fig 3) comprises a plurality of conductive probe circuits provided on said probe base (12, fig 4) in electrical contact with said

plurality of probe pins (16), respectively, and circuit board (10) provided in electrical contact with said plurality of conductive probe circuits (T).

However, Evans et al are silent on the circuit board in electrical contact with the conductive is flexible.

On the other hand, Cheng et al teach (fig 1) the circuit board (80) in electrical contact with the conductive is flexible.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Evans et al and use the flexible printed circuit as taught by Cheng et al for the purpose of ensuring the resilient pressure on the dut.

As to claim 21, Evans et al disclose (figs 3, 4, 10) a probe module comprising:

A probe base (12, fig 4) having a plurality of conductive metal traces (T), the probe base (12) being defined by a first end (end comes to contact with dut) and a second end (end connect with the testing apparatus);

A plurality of probe pins (16) electrically connected to the conductive metal traces (T) of the first end of the probe base (12);

A circuit board (10) electrically connected to the conductive metal traces (T) of the second end of the probe base (12), thereby allowing the plurality of the probe pins (16) to be electrically connected to the circuit board (10) via the plurality of conductive metal traces (T).

However, Evans et al are silent on the circuit board in electrical contact with the conductive is flexible.

On the other hand, Cheng et al teach (fig 1) the circuit board (80) in electrical contact with the conductive is flexible.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Evans et al and use the flexible printed circuit as taught by Cheng et al for the purpose of ensuring the resilient pressure on the dut.

As to claim 22, Cheng et al disclose (fig 1) a probe module comprising:

The probe module wherein the flexible circuit board (80) couples the probe pins (64) to a testing unit via the conductive metal traces.

As to claim 33, Cheng et al disclose (fig 1) the probe module of claim 2 1 wherein the plurality of probe pins (64) are electrical connected to the conductive metal traces (85) of the first end of the probe base (60) by being bonded to the probe base (60), and the flexible circuit board (80) is electrically connected to the conductive metal traces (85) of the second end of the probe base by being bonded to the probe base.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is (703) 306-5858. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtiez Nestor, can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN.
March 8, 2006

VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
03/20/06